



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 2.5.2001  
COM(2001) 219 final

**FOURTH REPORT FROM THE COMMISSION  
TO THE COUNCIL**

**ON THE SITUATION IN WORLD SHIPBUILDING**

**FOURTH REPORT FROM THE COMMISSION  
TO THE COUNCIL**

**ON THE SITUATION IN WORLD SHIPBUILDING**

**TABLE OF CONTENTS**

Executive Summary .....	3
1. Introduction.....	4
2. Market analysis .....	5
2.1. Market shares .....	5
2.2. Price developments.....	9
2.3. Detailed price analysis.....	11
3. Detailed cost investigations .....	13
3.1. Update of previous investigations .....	13
3.2. New investigations .....	16
4. Conclusions.....	19
5. References.....	20

## EXECUTIVE SUMMARY

Article 12 of Council Regulation (EC) No 1540/98 of 29 June 1998 establishing new rules on aid to shipbuilding<sup>1</sup> requires the Commission to present to the Council a regular report on the market situation and appraise whether European yards are affected by anti-competitive practices. Accordingly, the Commission has presented to the Council three previous reports on the situation in world shipbuilding<sup>2</sup>, outlining the serious difficulties the shipbuilding sector is facing and providing detailed information on the unfair commercial practices of Far East competitors. This fourth report is in continuity with the approach and the findings of the first three reports. A separate Commission report will be issued in May 2001 on the alleged subsidisation of Korean shipyards under the TBR examination procedure initiated on 2 December 2000<sup>3</sup>.

The year 2000 has seen a significant expansion in orders for new ships. Nearly 56 % more orders were placed as compared to 1999. The larger part of this increase in ordering has been to the benefit of South Korean shipyards which have seen market share increase again. EU yards also benefited considerably from the higher demand for ships, although orders for cruise ships may have played a dominant role here. In 2000, South Korea has consolidated its position as the largest shipbuilding country/region in the world, accounting for more than 35 % of all tonnage ordered world-wide.

The market share for the EU shipbuilding industry has remained stable in 2000 as losses in some market segments were compensated by additional orders for cruise ships. Half of the volume (in compensated gross tons - cgt) produced in Europe in 2000 concerns these ships for which there is as yet no Far East competition. However, only a limited number of EU yards produce cruise ships. The largest part of the EU shipbuilding yards continue to compete against Far East yards on standard merchant vessels. Including cruise ships, the market share for the EU and Norway is ca. 18 % (in cgt). If orders for cruise ships are excluded from the overall figures, the market share of EU yards for new orders in 2000 is below 10 %.

In 2000 prices for new ships were reported to recover in certain market segments from the very low levels seen after the Asian crisis in 1997. To gain a more accurate picture and confirmation of these reported developments, prices in South Korean shipyards have been monitored on a contract by contract basis. The analysis clearly shows that the upward tendency of prices seen in autumn 2000 was not sustained, leading to the conclusion that overall price levels have not recovered and are still significantly lower than before the Asian crisis of 1997. There are no indications that Korean shipbuilders managed to raise price levels across the board as repeatedly announced by Korean sources. Therefore the Commission maintains its view that significant over-capacities in South Korean shipbuilding, combined with an ongoing need to generate new orders in order to assure sufficient cash flow, prevent a recovery of prices and the market in general.

---

<sup>1</sup> OJ L 202 of 18.7.1998, p. 1.

<sup>2</sup> COM(1999) 474 final of 13.10.1999, COM(2000) 263 final of 3.5.2000, and COM(2000) 730 final of 15.11.2000.

<sup>3</sup> OJ C°345 of 2.12.2000.

Since the Commission's last report seven more detailed cost investigations for orders placed in Korean yards have been undertaken. In no case it has been concluded that any of the contracts examined has been priced at an economically viable level, i.e. covering operating costs, profits and debt repayments. Losses, calculated in this way, on these newly investigated orders are 14 % on average.

The Commission will continue its market monitoring and cost investigations.

## **1. INTRODUCTION**

Article 12 of Council Regulation (EC) No 1540/98 of 29 June 1998 establishing new rules on aid to shipbuilding<sup>4</sup> requires the Commission to present to the Council a regular report on the market situation and appraise whether European yards are affected by anti-competitive practices. Accordingly, the Commission has presented to the Council three previous reports on the situation in world shipbuilding<sup>5</sup>, outlining the serious difficulties the shipbuilding sector is facing and providing detailed information on the unfair commercial practices of Far East competitors. This fourth report is in continuity with the approach and the findings of the first three reports. Therefore this report should be seen in conjunction with key elements of the earlier reports, in particular regarding

- the longer term supply and demand analysis;
- general remarks on the nature of shipbuilding contracts and on the underlying study works;
- the analysis of the financial sector in South Korea;
- details of certain investigated shipyards;
- the description of the applied methodology;
- the analysis of the shipbuilding industry in the People's Republic of China; and
- the historical background of aid to EU shipyards.

Nevertheless, the information contained in the first three reports is updated in the present report as appropriate, and essential elements are repeated where necessary. This concerns in particular the detailed cost investigations for shipbuilding orders awarded to Asian yards as the underlying cost model is re-run whenever new or better information is obtained.

This fourth report updates information on market shares and price developments. Moreover, new cost investigations for specific orders placed in South Korean yards have been undertaken since the last report and the results are presented in this report.

---

<sup>4</sup> OJ L 202 of 18.7.1998, p. 1.

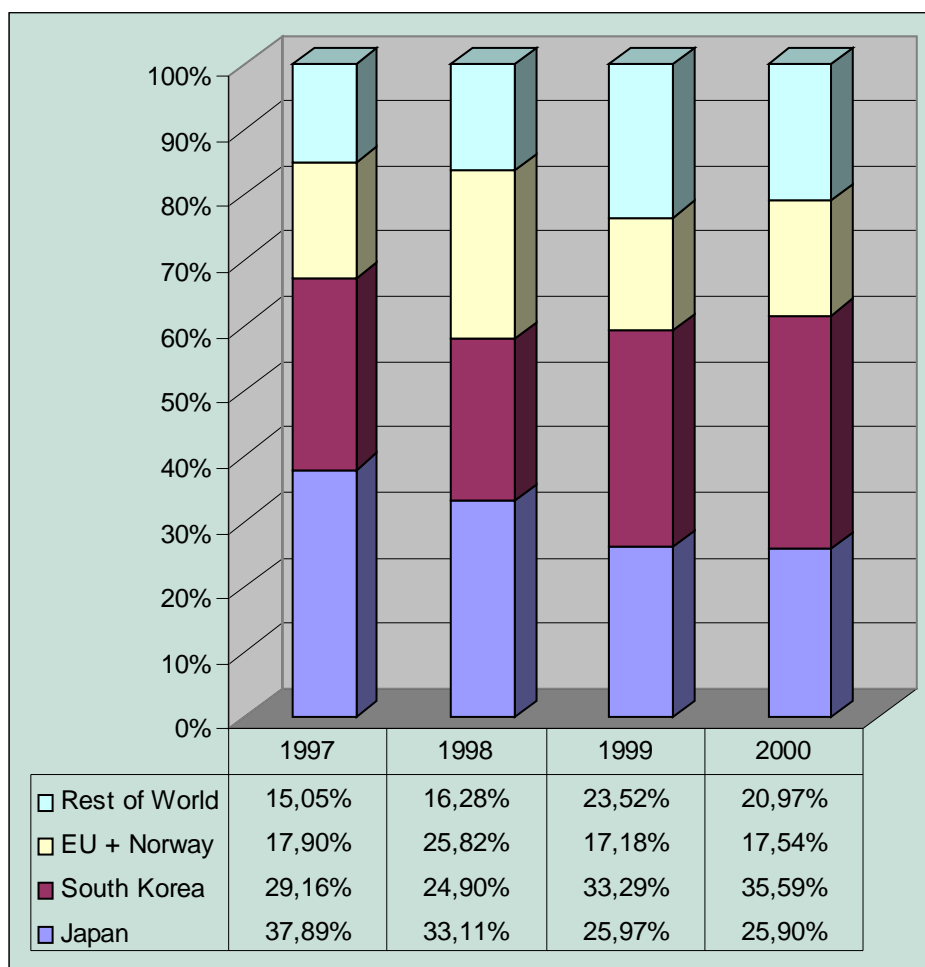
<sup>5</sup> COM(1999) 474 final of 13.10.1999, COM(2000) 263 final of 3.5.2000, and COM(2000) 730 final of 15.11.2000.

## 2. MARKET ANALYSIS

### 2.1. Market shares

The year 2000 has seen a significant expansion in orders for new ships. Nearly 56 % more orders were placed as compared to 1999, bringing the total volume of new orders to 29,7 Mio. cgt. The larger part of this increase in ordering has been to the benefit of South Korean shipyards which have seen market share increase again. The following graph presents market shares for new order volume based on cgt in the main shipbuilding regions, comparing 2000 with previous years. It should be noted that the data for 2000 is based on available figures which, due to a delay in reporting, are not yet fully consolidated.

*Fig. 1 - Market shares in new orders in percent and based on cgt, 1997-2000*



Source: Lloyd's Register of Shipping.

This shows that in 2000, South Korea has consolidated its position as the largest shipbuilding country/region in the world, accounting for more than 35 % of all tonnage ordered world-wide. Therefore the trend described in the previous reports continues. The latest expansion of Korean market share in the period in question has been mainly to the detriment of the "Rest of the World", although affecting different shiptypes (and thus different shipyards) in different ways, while previous expansion of Korean market share had been to the detriment of Japanese and European yards. At the same time South Korean yards face a situation in which ship prices have not recovered from their historical low in 1998/99 and profits are difficult to achieve. To fill the over-capacities in Korea (and recover at least part of the massive investments needed for physical expansion), yards actively seek to generate a high rate of new orders, while at the same time they target higher-value market segments such as gas carriers, containerships or ferries. With all major Korean yards following the same approach, depressed prices now affect all market segments where Korean yards are active. Moreover the fierce internal competition in Korea has led yards to expand capacity even further (e.g. through converting repair facilities into newbuilding facilities as in the case of Hyundai Mipo or lengthening of docks as undertaken by Daewoo), hoping to achieve increased economies of scale and thus a competitive advantage. Consequently, there are no signs that Korean yards will act to stabilise the market and raise prices to commercially viable levels, in particular as yard closures in Korea are politically difficult to implement, and yards continue - as they did in the past - to rely on support from the Government-controlled financial sector when their situation becomes critical.

The fact that, despite the increased Korean market share, the market share for the EU shipbuilding industry (including Norway) has not further deteriorated in 2000 has to be seen in the light of the still booming cruise ship industry. Half (50,1 %) of the cgt volume produced in Europe in 2000 concerns these ships for which there is as yet no Far East competition. Nevertheless, the highly visible efforts of Samsung Heavy Industries to enter the cruise ship market, with some 200 staff assigned to the task, were used by some cruise lines as a leverage to negotiate and obtain lower contract prices with EU yards. While the added value generated by the building of cruise ships may be significant for the EU economy, and the efforts of the EU shipbuilding industry to develop a sound alternative portfolio deserve recognition, it should be kept in mind that only a very limited number of EU yards produce cruise ships. The largest part of the EU shipbuilding yards continues to compete against Far East yards on standard merchant vessels. The situation of some individual yards, in particular those outside the Euro-zone, has become very critical and has resulted in partial closures with significant staff redundancies in 2000 (for example in the UK at Harland & Wolff and at Cammell Laird). Moreover, more and more indications emerge that the current cruise ship boom may soon be over. Over-capacities in the cruise sector already have an impact on prices for cruises, hurting the profits of the cruise companies and making them more reluctant to order new tonnage. The situation of this industry very much depends on economic conditions in the USA (where most of the demand for cruises is located) which now shows signs of weakening. If demand in the cruise sector should falter, this important segment of EU shipbuilding activities will be seriously affected also.

If orders for cruise ships are excluded from the overall figures, the market shares for new orders in 2000 (in cgt) are as follows:

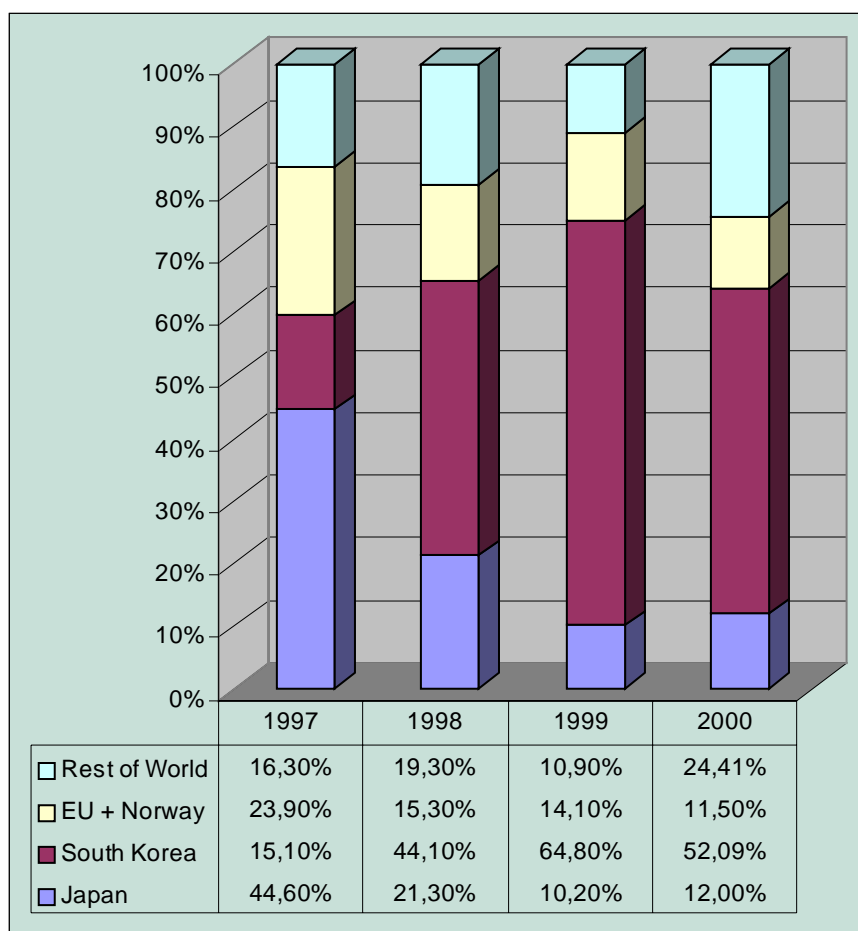
- Korea 39,62 %
- Japan 26,95 %
- EU 9,96 %
- Rest of World 23,47 %.

Another important factor in considering market shares in 2000 is that, in accordance with Council Regulation No 1540/98, operating aid in the EU has been abolished for shipbuilding contracts signed as of 1 January 2001. This deadline has led to a great number of orders placed in EU yards in the last weeks of 2000. Indeed, the overall volume of new orders placed at EU yards in 2000 increased by 64,5 % as compared to 1999, exceeding the overall growth in the world market (56 %). Consequently, and in line with expectations, ordering has been very slow in the first two months of 2001. Only longer term statistics will reveal whether additional orders have been placed or whether, as expected, future demand was simply brought forward. In Japan where domestic demand has always been an important factor, shipyards profited from some new orders from Japanese owners, in particular bulk carriers. Nevertheless, the Japanese shipbuilding industry is currently undergoing a restructuring process with closures of some smaller facilities and mergers between the big shipbuilding groups. The Japanese Government aims to reduce the number of major shipbuilding groups in Japan from seven to three or four. At least two mergers, between Hitachi Zosen and NKK Corp., and between Mitsui Engineering and Shipbuilding, Kawasaki Heavy Industries and Ishikawajima-Harima Heavy Industries, have in the meantime been undertaken or are being concretely discussed, respectively. More restructuring is expected as Japanese yards have been the main victim of aggressive Korean pricing practices, luring away European owners who have traditionally ordered in Japan.

Restructuring efforts also continue in the EU. The two large shipbuilding groups in Spain have been merged, the largest Italian shipbuilder is undergoing privatisation and, in Germany, efforts are being made to consolidate parts of the shipbuilding industry through mergers as well.

When analysing the market shares for the important segment of container ships, which dominate long-distance liner shipping between the world's main economic centres and which are mainly operated by European shipping lines, the situation is as follows.

*Fig. 2 - Market shares in new orders for containerships in percent and based on cgt, 1997-2000*



Source: Lloyd's Register of Shipping.

The findings from the previous three shipbuilding reports are confirmed. Korean yards dominate the segment of very large containerships ("Post-Panamax"), leaving only smaller tonnage, for which Korean yards are not well suited due to their size, to EU competitors whose market share in the containership sector has shrunk further. It should be noted that the trend towards much larger ships automatically triggers demand for smaller ships. These smaller ships are needed to supply cargo to the large vessels operating between major hubs. This additional demand has mainly benefited non-EU yards, e.g. in Poland and Croatia, which explains the big market share increase for the "Rest of the World". The commercial volume of these orders is small compared to the volume created by the initial demand for the very large ships. In summary, EU yards lost further market share in the containership segment, while Korea stabilised its leading position, although at a slightly lower level.



## 2.2. Price developments

In the second and third quarter of 2000 prices in certain market segments started to recover from the very low levels seen after the Asian crisis in 1997. This mainly concerned liquid and dry bulk carriers, gas carriers and, to some extent, containerships. With improved freight rates due to a higher oil price or expanding trade, respectively, owners were willing to pay a premium, in particular when early delivery of the vessels could be secured.

Market analysts such as Clarkson Research report prices for main shiptypes on a monthly basis. This information has become something of a benchmark, in particular for ship brokers, although other sources of prices are available such as from Lloyds Shipping Economist. It should be noted that Clarkson information is extensively used by the Korean Shipbuilders Association as evidence for a recovering market. The latest information is summarised in the following tables, taken from the December 2000 issue of "Clarkson World Shipyard Monitor". The tables compare prices at the end of 1999 with those prevailing in November 2000 firstly for bulk shiptypes and secondly for other shiptypes (referred to as specialised vessels by Clarkson Research).

*Table 1 - Clarkson Research price data for bulk shiptypes (to November 2000)*

Shiptype			Price (Mio. USD)		Change
			1999	2000	
Tankers	VLCC	300 000 dwt	69,0	76,0	10,1 %
	Suezmax	150 000 dwt	42,5	52,0	22,4 %
	Aframax	110 000 dwt	33,0	41,0	24,2 %
	Panamax	68 000 dwt	31,0	35,5	14,5 %
	Handy	47 000 dwt	26,0	29,0	11,5 %
Bulkers	Capesize	170 000 dwt	35,0	40,0	14,3 %
	Panamax	75 000 dwt	22,0	22,0	0,0 %
	Handymax	51 000 dwt	20,0	20,5	2,5 %
	Handysize	30 000 dwt	15,5	15,0	-3,2 %

*Table 2 - Clarkson Research price data for specialised shiptypes (to November 2000)*

Shiptype		Price (Mio. USD)		Change
		1999	2000	
LNG carrier	138 000 m3	165,0	172,5	4,5 %
LPG carrier	78 000 m3	56,0	60,0	7,1 %
Container	400 TEU	8,5	10,0	17,6 %
Container	1 100 TEU	17,5	18,0	2,9 %
Container	3 500 TEU	38,0	41,5	9,2 %
Ro/Ro	1 200 - 1 300 lm	21,5	20,0	-7,0 %
Ro/Ro	2 300 - 2 500 lm	32,5	33,0	1,5 %
Tweendecker	15 000 dwt	13,0	13,8	6,2 %

The tanker prices show considerable rises in the eleven-month period quoted. The average for all the types shown is just above 16 %. However, detailed analysis of contract prices undertaken by an independent consultant on behalf of the Commission shows that this is far too optimistic and does not reflect the actual level of prices of contracts placed over this year. For example, the price level shown for a Suezmax at 52,0 Mio. USD is far higher than any Suezmax price yet seen in South Korean shipyards.

Bulk carrier price rises are generally indicated as rising less, with the overall average rise being 3,4 % over the period shown. The biggest rise is shown for capesize ships and again this is regarded as over-optimistic when compared with the results of the detailed contract price analysis carried out for the Commission.

For the specialist shiptypes the most significant sector in relation to the South Korean industry is container ship construction, where Clarkson Research indicates an average price rise of just under 10 % over the year. Again, this does not concur with the detailed analysis of contracts taken in South Korea, as discussed later in this report. It should also be noted that Clarkson Research does not cover the segment of the very large containerships where most of the market activity took place in 2000 and therefore the price information given by Clarkson Research has to be seen as incomplete in that respect. The price level indicated by Clarkson Research for a LNG tanker is difficult to understand in that no price at that level has so far been seen from a Korean or any other shipyard.

In the search for explanations for the significant price drops for newly built ships productivity increases which are estimated to be at maximum 5-7 % per year or by break-through innovations as they can be observed, for example, in the IT industry, cannot provide the answer. Ships are large scale capital goods with a life expectancy of up to 30 years. Investments are carefully considered and technical innovation is in general evolutionary, i.e. the shipping industry rarely takes the risk to order a completely untested design. Comparing the price levels before the Asian crisis of 1997 with today's levels shows that the price drop has not been recovered. The initial justifications for the significantly lower prices given by Korea (WON depreciation, lower wages, longer working hours, massive annual productivity increases) have mostly lost their significance, leading the Commission to doubt that current price

levels are commercially viable. For comparison purposes, prices per shiptype as found through the Commission's detailed price monitoring on a contract by contract base are also available. As the following figures indicate, price levels in 2000 were still significantly lower than before the Asian financial crisis.

*Table 3 - Comparison of price levels in 1997 and 2000 for certain shiptypes*

	<b>1997 (*)</b>	<b>End 2000 (*)</b>	<b>Change in %</b>	<b>2000 (**)</b>	<b>Change in %</b>
<b>Panamax Container Carrier 3 500 TEU</b>	53,0	41,5	-21,7	38,0	-28,3
<b>1 100 TEU Container Carrier</b>	20,0	18,0	-10,0	N/A	-
<b>Very Large Crude Oil Carrier (VLCC)</b>	83,0	76,0	-8,4	70,0	-15,7
<b>Suezmax Tanker</b>	52,0	52,0	0,0	43,0	-17,3
<b>Capesize Bulk Carrier</b>	40,5	40,0	-1,2	39,0	-3,7
<b>Panamax Bulk Carrier</b>	27,0	22,0	-18,5	22,0	-18,5
<b>Liquid Natural Gas Carrier</b>	230,0	172,5	-25,0	155,0	-32,6
<b>Tweendecker 15 000 dwt</b>	16,5	13,8	-16,4	N/A	-

Source: Clarkson World Shipyard Monitor(\*), Commission (\*\*).

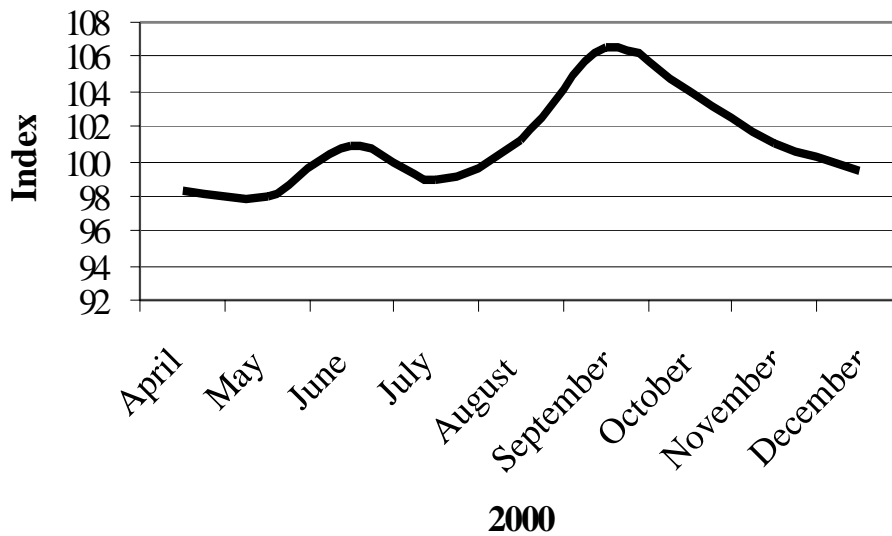
In summary the prices indicated in the Clarkson monthly report do not concur with the findings of detailed research on a contract by contract basis undertaken for the Commission. Details of this research are given below. A more specific critical analysis of the approach used by Clarkson Research was already provided in the third shipbuilding report and is not repeated here.

### **2.3. Detailed price analysis**

Prices in South Korean shipyards have been monitored on a contract by contract basis to gain a more accurate picture of developments than is available from commercially published statistics. The results are presented below in the form of indices that compare current price levels with the average level prevailing in the twelve months prior to April 2000 (index=100), or in other words comparing current prices to the level prevailing prior to the signing of the "Agreed Minutes" between the EU and South Korea.

The overall index is presented in Figure 3, showing average movement for all shiptypes in all shipyards in South Korea.

*Fig. 3 - Overall price index for South Korean shipyards*



The graph clearly shows that the upward tendency of prices seen in autumn 2000 was not sustained. As already explained in the third report on shipbuilding, various developments came together at the time: Tankers and bulk carriers benefited from a healthy transport market, and the subsequent demand for new ships drove up prices. This effect was more pronounced in the case of tankers, as the market had started to anticipate the impact of the forthcoming new EU legislation and IMO rules on an accelerated phasing-out of existing single hull tankers. A currently good market for smaller tankers and the fear that, when the legislation has come into force, prices will be significantly higher, has triggered demand with the result that yards have been able to ask higher prices for these shiptypes. With limited availability of building slots for early delivery in Korean yards and EU yards not able to compete at these still very low, commercially non-viable price levels, owners need to pay a premium compared to 1998 and 1999. Prices for container ships increased in the first half of 2000, but have since fallen back somewhat, partly because freight rates have not rebounded as is the case with liquid bulk cargo, and the growth in vessel size provides a new economy of scale which allows companies to operate at comparatively low freight rates. In the meantime the freight rates in dry and liquid cargo shipping have also levelled off, resulting in fresh downward pressure on prices.

The Commission also analysed price trends for individual Korean yards. Depending on the typical product portfolio, the economic situation of the company and the resulting pricing policy, a picture emerges which reflects the strengths and weaknesses of the particular yard. While Samho Heavy Industries, now under management control of Hyundai Heavy Industries, has managed to increase prices significantly (although the previous price levels were extremely low and current price levels are still under the Korean average), Hyundai Heavy Industries themselves, and in particular Hyundai Mipo, could not sustain higher price levels and have actually fallen back behind the price levels of early 2000. Hanjin Heavy Industries and Construction, already in previous reports considered a comparatively prudent operator, managed to increase price levels in a sustained manner, indicating

that the selective intake of orders and the core business of providing ships for the parent company, Hanjin Shipping, have paid off.

The Commission's detailed price analysis leads to the conclusion that overall price levels have not recovered and are still significantly lower than before the Asian crisis of 1997. There are no indications that Korean shipbuilders managed to raise price levels across the board as repeatedly announced. Therefore the Commission maintains its view that significant over-capacities in South Korean shipbuilding, combined with a permanent need to generate new orders in order to assure sufficient cash flow, prevent a recovery of prices and the market in general.

Not all major Korean yards have published their 2000 accounts yet. For those who did massive drops in profits or even losses are reported. Officially Korean yards claim high costs for disinvestment with regard to other chaebol subsidiaries (in particular those in the automotive and the construction sector) as the reason for the losses. It is, however, clear that the main reason has to be seen in very low order prices in 1998 and 1999 while building and delivery of the vessels took place under changed economic conditions in 2000 (wage increases, price inflation, WON appreciation). This development was forecasted by the Commission in its previous reports.

The allegations on Government intervention in the financing of the sector are being investigated in the context of an examination procedure under the Trade Barriers Regulation (Regulation 3286/94); a report to that effect will be submitted to the Member States at the end of May 2001.

In general, it appears that the economic situation of Korean yards has not improved. Daedong Shipbuilding Co. remains under court receivership, while Halla Heavy Industries and Daewoo Heavy Industries have been transformed into new companies, allowing them to restructure or shed their debts. The other major yards, Hyundai Heavy Industries, Samsung Heavy Industries and, to a lesser extent, Hanjin Heavy Industries and Construction, have seen their profits reduced in 2000, followed by announcements that they will now focus on higher-value tonnage to make 2001 a more profitable year.

### **3. DETAILED COST INVESTIGATIONS**

#### **3.1. Update of previous investigations**

In order to collect the necessary data, the Commission has recourse to consultants whose ongoing study has defined a cost breakdown model, including all relevant cost components both of the direct ship production and the shipyard in general. The model is based on cost elements covering direct costs (materials, labour, equipment, etc.) and indirect costs (financing of the ship and of the production equipment, overhead, insurance, etc.). The calculated building price also includes a 5 % profit margin. More details of the cost model can be found in Annex I of the first report.

As the study develops, additional information is gathered and used to validate previous cost investigations. Consequently, the 25 orders placed in Korea covered in the first three reports have been recalculated and the updated findings are given below. As already stated in the first report all parameters are based on a prudent approach to ensure that calculated minimum costs for particular projects will be difficult to challenge. The updated analysis includes assumptions on inflation. With orders taken now but executed in the coming two to three years it is considered normal business practice to assess future costs at the time of building up to delivery.

In the context of the first shipbuilding report nine orders placed at South Korean shipyards were investigated. In addition to these orders, 9 more orders placed in Korea have been analysed for the second report and 7 investigations were added in the third report. The Commission ensured a balanced selection of shipbuilding contracts while taking into account the overall objective of the exercise, the relative urgency of the matter, and the availability of meaningful data for comparison. The Commission is convinced that the information entered into the analysis is at present the best available and reliable.

The following table summarises the updated findings for the 25 orders placed in Korea.

*Table 4 - Comparison of order prices and calculated construction prices for selected new shipbuilding contracts (update)*

	Shipyard	Shiptype	Owner	Contract price (Mio. USD)	Normal price (Mio. USD)	Loss/gain as % of normal price
	Daedong	35 000 dwt tanker	Seaarland	21,5	25,8	-17 %
	Daedong	Panamax bulker	Sanama	18,5	26,1	-29 %
	Daedong	46 000 dwt chemical tanker	Cogema	24,5	30,1	-19 %
(*)	Daewoo	VLCC	Anangel	68,5	73,6	-7 %
(*)/(**)	Daewoo	Ferry	Moby	74,3	89,0	-17 %
(*)	Daewoo	Panamax bulker	Chandris	22,5	23,5	-4 %
(*)	Halla	Panamax bulker	Diana	18,9	31,0	-39 %
(*)	Halla	3 500 TEU	Detjen	38,0	52,8	-28 %
(*)	Halla	Capesize bulker	Cargocean	32,0	45,8	-30 %
(*)	HHI	6 800 TEU	P&O Nedlloyd	73,5	81,0	-9 %
(*)	HHI	5 600 TEU	K Line	54,3	59,3	-8 %
(*)	HHI	LNG carrier	Bonny Gas	165,0	182,5	-10 %
(*)	HHI	5 500 TEU	Yang Ming	56,0	64,6	-13 %
	Mipo	Cable layer	Ozone	37,3	46,8	-20 %
	Il Heung	3 700 dwt chemical tanker	Naviera Quimica	10,5	13,0	-19 %
	Samsung	5 500 TEU	Nordcapital	55,0	71,5	-23 %
	Samsung	3 400 TEU	CP Offen	36,0	59,2	-39 %
	Samsung	Ferry	Minoan	69,5	94,9	-27 %
	HHIC	6 250 TEU	Conti	62,0	62,7	-1 %
	HHIC	5 608 TEU	Conti	58,0	59,1	-2 %
	HHIC	1 200 TEU	Rickmers	19,5	20,4	-4 %
(***)	HHI	7 200 TEU	Hapag-Lloyd	72,0	81,0	-11 %
	HHI	Suezmax tanker	Athenian Sea Carriers	43,0	50,8	-7 %
	Daewoo	LNG carrier	Bergesen	151,1	148,3	+2 %
	Shina	Product tanker	Fratelli D'Amato	21,7	24,1	-10 %

(\*) These orders were also recalculated after new information on the debt situation of the companies was received.

(\*\*) This order was recalculated after the correct contract price was revealed in the owner's account statement for 2000.

(\*\*\*) This order was recalculated after the correct contract price was revealed in the press.

It should be noted that in no case has the model concluded that any of the contracts examined has been priced at an economically viable level, that is to say covering direct costs, plus an appropriate contribution to overhead costs, plus an appropriate contribution to debt servicing (i.e. repayment of principal plus interest), plus an element of profit. The order for an LNG carrier at Daewoo shows a marginal profit, but only after the massive debt reduction of nearly 80 %, granted to the yard in autumn 2000, was factored in.

In most of the contracts investigated, prices have also failed to reach the break-even level (i.e. the normal price excluding profit). On average the losses taken by Korean yards with regard to these orders are ca. 16 % of the actual building costs, when inflation is factored in. Some orders may be close to profitability, but these concern shipyards that have been able to reduce their debts, either through the issuing of new shares (HHI) or through debt restructuring (deferred repayments, moratoria on interest, write-offs, debt-equity swaps) as it is the case with Daewoo and Halla/Samho. The Commission is examining the compatibility of the new debt situation with WTO provisions in the context of the separate TBR investigation.

### **3.2. New investigations**

Since the Commission's last report seven more detailed cost investigations for orders placed in Korean yards were undertaken. The aim of these investigations was to cover as much of the Korean shipbuilding industry as possible, looking at specific orders that would have been of interest to EU yards. The following orders were investigated:

- Ferry (series of 2), 39 600 cgt, to be built at Hyundai Heavy Industries (HHI);
- 7 400 TEU containership (series of 2), 57 850 cgt, to be built at Samsung Heavy Industries (SHI);
- Suezmax crude oil (series of 6), 38 250 cgt, to be built at Hyundai Heavy Industries (HHI);
- 2 500 TEU containership (series of 3), 20 844 cgt, to be built at Daedong Shipbuilding Co. Ltd.;
- Chemical tanker (series of 4), 20 800 cgt, to be built at Hyundai Mipo;
- Aframax crude oil tanker (series of 4), 26 650 cgt, to be built at Samho Heavy Industries (SHI);
- Ultra Large Crude Oil Carrier (series of 4), 70 500 cgt, to be built at Daewoo Shipbuilding and Marine Engineering (DSME).

Table 5 summarises the findings from the new cost investigations.



*Table 5 - Comparison of order prices and calculated construction prices for selected new ships (new investigations)*

<b>Shipyard</b>	<b>Shiptype</b>	<b>Owner</b>	<b>Contract price (Mio. USD)</b>	<b>Normal price (Mio. USD)</b>	<b>Loss/gain as % of normal price</b>
HHI	Ferry	Stena	70,0	88,4	-21 %
SHI	7 400 TEU	OOCL	79,7	94,1	-15 %
HHI	Suezmax tanker	Jebsen	43,0	51,5	-17 %
Daedong	2 500 TEU	EF Shipping	30,0	31,4	-4 %
Mipo	Chemical tanker	Bottiglieri	24,5	27,3	-10 %
SHI	Aframax tanker	Chartworld Shipping	33,5	41,3	-19 %
DSME	ULCC	Hellespont	85,0	94,0	-10 %

Losses taken for these newly investigated orders are on average 14 %, as compared to average losses of 16 % for the previously investigated orders. The reasons for this "improvement" are to be found in slightly higher contract prices, in particular for tankers, and, most of all, in a significant restructuring of the company debts, leading either to lower debt levels or to longer repayment periods, thus stretching the debts over more contracts. As stated in the third report, the recognition of these changes in company debts does not mean that the Commission accepts the new debt situation as such in terms of its compatibility with WTO provisions.

Concerning the order for a ferry at Hyundai Heavy Industries (HHI), the cost evaluation concluded that the price had been set below operating cost level. Even without taking inflation into account, the contract would make a considerable loss at the operating level and no provision is included for debt repayment. This is likely to be a significantly loss-making contract for HHI. Stena has in the past been an owner who ordered vessels, including ferries, with a number of yards in the EU and in Far East. Ships similar to the one investigated were in the past ordered by Stena in Korea, in Finland and in Spain. Therefore, and given that at least one EU yard actually tendered for the contract, it can be concluded that this order should have been within reach of EU shipbuilders and it was the very low price which ultimately brought the contract to Korea. Consequently this contract has to be seen as injurious to EU shipyards.

For the containership of 7 400 TEU to be built at Samsung Heavy Industries the model calculation concludes that the contract is priced at the operating cost level (including provision for inflation), and makes no contribution to below the line expenses, in particular servicing debt. It should be noted that the amount calculated for servicing debt includes provision for interest payment only and does not provide for the generation of cash to repay principal. It has been assumed that Samsung will continue to refinance (i.e. roll over) debt in this situation, rather than making repayments as planned. It is therefore concluded that the price of the contract does not meet two of the aims of the company, as outlined in Samsung's plans set out in February 2001 in a document from Samsung Securities. Firstly the company forecasts a return to substantial profitability in 2002, following forecast losses

in 2001. The price does not support that forecast. Secondly significant reduction of debt is also forecast and again the results do not support that forecast.

With regard to the order for six Suezmax tankers at Hyundai Heavy Industries the results of the cost evaluation confirm previous results for HHI, i.e. that the price does not include sufficient provision for inflation and makes no contribution to debt servicing. The implications of this conclusion are that the profitability of the company is likely to continue to decline, rather than recovering as forecast by Hyundai. It is possible that further refinancing may be needed in future if HHI is unable to meet its debt commitments. Seven other orders of this shiptype at around this price were placed at HHI over the first six months of the current monitoring phase.

For the containership order at Daedong Shipbuilding Co. Ltd. the cost evaluation concludes that the contract has not been taken on a profitable basis, and may only reach the break-even level. This indicates a slight departure from previous contracts examined at Daedong which were highly loss-making. The shipyard has been specifically helped to achieve this improved result by a number of factors:

- Following bankruptcy the shipyard is operating under a moratorium on the servicing of debt that effectively means the cost of facilities is very low;
- the ships are for delivery in this year or mid 2002, and inflation effects are therefore limited;
- the shipyard operates at a significantly lower level of overhead than the larger yards in South Korea;
- Daedong has modern purpose-built facilities that lead to a high level of performance.

In addition to these specific factors it also has to be said that the price of the ship is relatively good, in particular in relation to the larger container ships being pursued by the larger shipyards. It should also be noted that Daedong, still being under court receivership, is obliged to accept only, as a matter of principle, profitable contracts in order to recover its economic viability.

Concerning the order for chemical tankers placed at Hyundai Mipo yard the cost evaluation gave the result that the price covers operating costs and inflation, but will make no contribution to debt servicing. Whilst the level of debt at Hyundai Mipo is lower than the large South Korean shipyards, a considerable debt has been accumulated in developing shipbuilding facilities (the yard has previously been active in ship repair only). At this price level it is likely that re-financing will be required. Future profitability is doubtful, bearing in mind that this result will be typical of the shipyards orderbook and that early contracts in this series were taken at a lower price and are therefore likely to be loss making.

With regard to the order for Aframax tankers, placed at Samho Heavy Industries, results of the cost evaluation reveal that the price taken for this ship is better than those previously examined but that it is still below an economically viable level and makes no contribution to servicing Samho's debts. Previous analysis for contracts at Halla/Samho concluded that whilst massive debt restructuring had enabled the

shipyard to reduce contract costs by about 6 %, the prices of contracts remained far below an economically viable level. Even given the higher price negotiated by HHI for the two optional contracts (34 Mio. USD), the price falls marginally below the calculated operating cost, and the contract does not appear to include any provision for debt servicing. It should also be noted that no provision is included for management fees for HHI and this will increase the operating loss further.

In the case of the Ultra Large Crude Oil Carrier, ordered by Hellespont at Daewoo Shipbuilding and Marine Engineering, the cost evaluation concludes that the price covers operating costs only, without making a significant contribution to debt servicing commitments of the company following restructuring. This confirms previous conclusions for Daewoo that the price of contracts is insufficient to generate an operating profit and to service the company's debt commitments, even after significant restructuring. This is despite assumptions for very high levels of performance at Daewoo.

#### **4. CONCLUSIONS**

This fourth report confirms the findings of the first three reports.

The year 2000 has seen a significant expansion in orders for new ships. Nearly 56 % more orders were placed as compared to 1999. The larger part of this increase in ordering has been to the benefit of South Korean shipyards which have seen market share increase again. EU yards also benefited considerably from the higher demand for ships, although orders for cruise ships may have played a dominant role here. In 2000, South Korea has consolidated its position as the largest shipbuilding country/region in the world, accounting for more than 35 % of all tonnage ordered world-wide.

The market share for the EU shipbuilding industry has remained stable in 2000 as losses in some market segments were compensated by additional orders for cruise ships. Half of the volume (in cgt) produced in Europe in 2000 concerns these ships for which there is as yet no Far East competition. Including cruise ships, the market share for the EU and Norway is ca. 18 % (in cgt). If orders for cruise ships are excluded from the overall figures, the market share of EU yards for new orders in 2000 is below 10 %.

In 2000 prices for new ships were reported to recover in certain market segments from the very low levels seen after the Asian crisis in 1997. Prices in South Korean shipyards have been monitored on a contract by contract basis by the Commission. The analysis clearly shows that the upward tendency of prices seen in autumn 2000 was not sustained, leading to the conclusion that overall price levels have not recovered and are still significantly lower than before the Asian crisis of 1997. There are no indications that Korean shipbuilders managed to raise price levels across the board as repeatedly announced by Korean sources. Therefore the Commission maintains its view that significant over-capacities in South Korean shipbuilding, combined with an ongoing need to generate new orders in order to assure sufficient cash flow, prevent a recovery of prices and the market in general.

Since the Commission's last report, seven more detailed cost investigations for orders placed in Korean yards have been undertaken. In no case it has been concluded that any of the contracts examined has been priced at an economically viable level, i.e. covering operating costs, profits and debt repayments. Losses, calculated in this way, on these newly investigated orders are 14 % on average.

The Commission will, in line with its obligations arising from the reporting requirements in Council Regulation (EC) No 1540/98, continue its market monitoring and cost investigations.

## **5. REFERENCES**

Council Regulation (EC) No 1540/98 of 29 June 1998 establishing new rules on aid to shipbuilding, Official Journal L 202, 18.7.1998 p. 0001-0010

Report from the Commission to the Council on the situation in world shipbuilding, COM(1999) 474 final of 13.10.1999

Second Report from the Commission to the Council on the situation in world shipbuilding, COM(2000) 263 final of 3.5.2000

Third Report from the Commission to the Council on the situation in world shipbuilding, COM(2000) 730 final of 15.11.2000

Council Regulation (EC) No 3286/94 of 22 December 1994 laying down Community procedures in the field of the common commercial policy in order to ensure the exercise of the Community's rights under international trade rules, in particular those established under the auspices of the World Trade Organization, Official Journal L 349, 31.12.1994 p. 0071-0078

OECD "Agreement Respecting Normal Competitive Conditions in the Commercial Shipbuilding and Repair Industry", Final Act signed in December 1994 by the Commission of the European Communities, and the Governments of Finland, Japan, the Republic of Korea, Norway, Sweden and the United States

OECD "Understanding on export credits for ships", 1994.